

5

CLAIMS

1. IC-circuit construction where the circuit is partitioned into power consuming sub-circuits (1,6) which each has to receive a supply voltage, and where the sub-circuits (1,6) are connected in series and where a control-circuit (4) is provided in order to balance the voltage drops across the power consuming sub-circuits (1,6) whereby constant voltage-drops over the sub-circuits (1,6) are maintained, and where ground voltage level (VHH) in the power supply of a first sub-circuit (1) is used as the supply voltage level in a second sub-circuit (6) and where the control circuit (4) comprises a first buffer capacitor (10) coupled in parallel over the supply voltage level (VBB) and ground voltage level (VHH) of the first sub-circuit (1) and a second buffer capacitor (11) coupled in parallel over the supply voltage level (VHH) and the ground voltage level (GND) of the second sub-circuit (6), whereby means for maintaining a uniform voltage drop over the first (10) and the second (11) buffer capacitor comprises at least one bucket capacitor (20,21,22) which is alternately coupled in parallel over the first (10) and the second (11) buffer capacitor through a switching system controlled by a toggling signal.
2. IC circuit as claimed in claim 1, wherein there are two bucket capacitors (21,22) that get switched at the same time such as to alternately couple to the first and the second buffer capacitor respectively.
3. IC circuit as claimed in claim 1 or 2, wherein the switches (25,28,35,36,37,38) for alternately coupling the bucket capacitors (20,21,22) are controlled by a free-running oscillator (17), a clock, or some other suitable signal of periodic or nonperiodic nature.

4. IC-circuit as claimed in claim 1, wherein sub-circuits (1,6) are digital or analog or mixed signal circuits.
5. IC circuit as claimed in claim 1, whereby sub-circuits (1,6) are located on each their chip.
6. IC circuit as claimed in claim 1, whereby the control circuit (4) is designed such as to maintain different voltage drops across sub-circuits (1,6).